

**Appl. No.** : 10/788,926  
**Filed** : February 25, 2004

### **REMARKS**

Claims 1, 9-17, and 39-56 were pending prior to entry of these amendments. Claims 1, 9, 12, 17, 39, 40, 50, 52, 53, 55, and 56 are amended herein. Claim 54 is canceled herein.

#### **Drawings**

The Examiner has objected to the drawings for failing to shown the limitations of "pad" in Claims 54 and 56. Claim 54 has now been canceled. Claim 56 has been amended to recite a pad configured to process the frontside of the substrate, wherein the process chamber is configured for electrochemical mechanical polishing of material from the frontside of the substrate using the pad. The limitation of "pad" 200 is shown in Figure 4A. Claim 56 is supported by the specification at, for example, the paragraph beginning on page 12, line 11. Applicants respectfully submit that, in view of the cancellation of Claim 54, the amendment to Claim 56, and the illustration of a pad 200 in Figure 4A, drawing changes are unnecessary to overcome the objection to the drawings.

#### **Allowable Subject Matter**

Applicants note with appreciation that Claims 9-11, 17, 40-43, 45, 46, 47, 48, 50, 51, and 55-56 would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claims 9, 17, 40, and 55 are now allowable as they have been rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claims 10, 11, 41-53, and 56 which depend from and include all of the limitations of Claim 9, 40, or 55 are also patentable.

Claims 45-48 and 50-51 have not been rewritten in independent form, but are allowable because they depend from Claim 39, which, as amended, is patentable over the cited references, as discussed in more detail below.

#### **Claim Objections**

Claim 12 is objected to because it depends from canceled Claim 8. To overcome this objection, Claim 12 has been amended to depend from Claim 1.

Appl. No. : 10/788,926  
Filed : February 25, 2004

**Rejections Under 35 U.S.C. §112**

Claim 54 is rejected under 35 U.S.C. §112, first paragraph. Claim 54 has been canceled.

Claims 53 and 55 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 53 and 55 have been amended to recite a process chamber configured for electrochemical deposition and a process chamber configured for electropolishing, respectively. Support for these amendments may be found in the specification, as originally filed, at, for example, page 7, first through third paragraphs.

**Rejections Under 35 U.S.C. §102**

Claims 1, 12, 39, 44, 49, and 52-54 are rejected under 35 U.S.C. §102(b) as being anticipated by Gibbs, U.S. Patent No. 4,043,894. Independent Claim 1 has been amended to recite a moving mechanism configured to move the another sealing member between the sealed position and an unsealed position. Independent Claim 39 has been similarly amended to recite a movable seal coupled to a second circumference of the base and configured to receive vacuum for holding the backside of the wafer against the base to seal the backside of the wafer during the processing, wherein the movable seal is configured to be movable between a sealed position and an unsealed position while the wafer is mounted on the base. Independent Claim 52 has been amended to recite a seal coupled to a second circumference of the base and configured to seal a second circumferential area, wherein the seal is configured to be movable between a sealed position and an unsealed position while the substrate is mounted on the base. Claim 50 has been amended to conform the claim language to the amended claim language of Claim 39, from which it depends. These amendments are fully supported by the specification, as originally filed, at, for example the first full paragraph on page 18 through the first paragraph on page 19, and Figs. 9A-9C.

Gibbs does not teach or disclose a moving mechanism configured to move the another sealing member between the sealed position and an unsealed position, as recited in amended Claim 1. Similarly, Gibbs does not disclose or teach a seal configured to be movable between a sealed position and an unsealed position while the wafer or substrate is mounted on the base, as recited in Claims 39 and 52, as amended. Gibbs discloses o-ring seals 36 that may be *removed*

Appl. No. : 10/788,926  
Filed : February 25, 2004

*for replacement* (Col. 4, lines 48-50), but does not disclose or teach that an o-ring seal configured to be *movable between a sealed position and an unsealed position*. The o-rings 36 in Gibbs are not *movable*, but merely capable of being *removed for replacement*. The illustrated apparatus is accordingly only configured for seal removal between wafers. Furthermore, unlike the recited mechanism in Claim 1, Gibbs does not disclose a moving mechanism for sealing and unsealing.

Claims 1, 39, and 52, as amended, are therefore patentable as they are not anticipated by Gibbs. Claims 12, 44-51, and 53, which depend from and include all of the limitations of Claim 1, 39, or 52, as amended, are therefore also patentable. Furthermore, each of the dependent claims recites further distinguishing features of particular utility.

#### **Rejections Under 35 U.S.C. §103**

Claims 12-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Gibbs in view of Fratello et al., U.S. Patent No. 5,655,677. As discussed above, Gibbs does not teach or disclose a moving mechanism configured to move the another sealing member between the sealed position and an unsealed position, as recited in amended Claim 1.

Similarly, Fratello et al. do not teach or suggest two sealing members or a moving mechanism configured to move the another sealing member between the sealed position and an unsealed position, as recited in amended Claim 1 from which Claims 12-16 depend. Fratello et al. disclose a *single* hollow o-ring sealing member 90, but do not teach or suggest more than one o-ring or a *moving mechanism* configured to *move* the o-ring 90 in a vertical direction between the sealed position and an unsealed position.

Furthermore, Applicants respectfully submit that Fratello et al. is nonanalogous art. If a cited reference “is not analogous art, it has no bearing on the obviousness of the patent claim.” *Jurgens v. McKasy*, 927 F.2d 1552, 1564 (Fed. Cir. 1991), *cert. denied*, 501 U.S. 902 (1991). “The combination of elements from non analogous sources, in a manner that reconstructs the applicant’s invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness.” *In re Oetiker*, 977 F.2d at 1445. The Federal Circuit has prescribed a two-step test for determining whether a prior art reference is nonanalogous and thus not relevant in determining obviousness. It must be determined (1) whether the reference is “within the field of

Appl. No. : 10/788,926  
Filed : February 25, 2004

the inventor's endeavor," and (2) if not, whether the reference is "reasonably pertinent to the particular problem with which the inventor was involved." *In re Deminski*, 796 F.2d 436, 443 (Fed. Cir. 1986). The Court has clarified that "it is necessary to consider 'the reality of the circumstances',... —in other words, common sense—in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor." *In re Oetiker*, 977 F.2d at 1443, 1445.

Fratello et al. are clearly not within the field of semiconductor processing apparatuses. Nor are Fratello et al. pertinent to the problem that Applicants faced (preventing contamination of a wafer backside during processing). Fratello et al. address the problem of providing leak-free containment of fluids transported in a carrier vessel for a pneumatic tube transport system. Tucker addresses this problem by providing a single hollow o-ring sealing member 90 in a groove on the perimeter of one of the shell members of the carrier vessel. A person of ordinary skill would not reasonably look to the field of electrical pneumatic tube transport systems for a solution to the problem faced by Applicants. Accordingly, Applicants respectfully submit that Fratello et al. are not analogous art and thus has no bearing on the obviousness of Claims 12-16.

Claims 12-16, which depend from and include all of the limitations of Claim 1, as amended, are therefore patentable as they are not obvious in view of Gibbs and Fratello et al., either alone or in combination. Furthermore, each of the dependent claims recites further distinguishing features of particular utility.

### **Conclusion**

Applicants respectfully submit that all of the pending claims are patentably distinguishable and allowable over the prior art of record. The cited references, either alone or in combination, do not teach or suggest the claimed invention.

Appl. No. : 10/788,926  
Filed : February 25, 2004

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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